GLOSSARY OF TERMS

AREA LOAD -- The total amount of electricity being used at a given point in time by all consumers in a utility's service territory.

CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC) - A state agency created by constitutional amendment in 1911 to regulate the rates and services of more than 1,500 privately owned utilities and 20,000 transportation companies. The CPUC is an administrative agency that exercises both legislative and judicial powers; its decisions and orders may be appealed only to the California Supreme Court. The major duties of the CPUC are to regulate privately owned utilities, securing adequate service to the public at rates that are just and reasonable both to customers and shareholders of the utilities; including rates, electricity transmission lines and natural gas pipelines. The CPUC also provides electricity and natural gas forecasting, and analysis and planning of energy supply and resources.

CAPACITY - The amount of electric power for which a generating unit, generating station, or other electrical apparatus is rated either by the user or manufacturer. There are various types of electricity capacity:

Dependable Capacity: The load carrying ability for the time interval and period specified when related to the characteristics of the load to be supplied. Dependable capacity is determined by such factors as capability, operating power factor, weather, and portion of the load the station is to supply.

Installed (or Nameplate) Capacity: The total manufacturer-rated capacities of equipment such as turbines, generators, condensers, transformers, and other system components.

Peaking Capacity: The capacity of generating equipment intended for operation during the hours of highest daily, weekly or seasonal loads.

Purchased Capacity: The amount of energy and capacity available for purchase from outside the system.

Reserve Capacity: Extra generating capacity available to meet peak or abnormally high demands for power and to generate power during scheduled or unscheduled outages. Units available for service, but not maintained at operating temperature, are termed "cold." Those units ready and available for service, though not in actual operation, are termed "hot."

DIRECT ACCESS - The ability of a retail customer to purchase commodity electricity directly from the wholesale market rather than through a local distribution utility.

DISPATCH - The operating control of an integrated electric system to assign generation to specific generating plants and other sources of supply to effect the most reliable and economical supply as the total of the significant area loads rises or falls. Control operations and maintenance of high-voltage lines, substations and equipment, including administration of safety procedures. Operate the interconnection. To schedule energy transactions with other interconnected electric utilities.

DISPATCHABLE GENERATION – A generation source that is controlled by a system operator or dispatcher who can increase or decrease the amount of power from that source as the system requirements change.

ENERGY - The capacity for doing work. Forms of energy include thermal, mechanical, electrical and chemical. Energy may be transformed from one form into another.

FEDERAL ENERGY REGULATORY COMMISSION (FERC) -- An independent regulatory commission within the U.S. Department of Energy that has jurisdiction over energy producers that sell or transport fuels for resale in interstate commerce; the authority to set oil and gas pipeline transportation rates and to set the value of oil and gas pipelines for ratemaking purposes; and regulates wholesale electric rates and hydroelectric plant licenses.

FORWARDS or Forward Electricity Price Curve - The Forward Electricity Price Curve is a list of prices as of today for the delivery of electricity at a series of different points of time in the future. The forward price is viewed as the best estimate of what the price will be in the future. This estimate includes allowances for a number of unknowns that may or may not eventuate (including supply/ demand/ weather/ transmission).

GRID - A system of interconnected power lines and generators that is managed so that the generators are dispatched as needed to meet the requirements of the customers connected to the grid at various points. Gridco is sometimes used to identify an independent company responsible for the operation of the grid.

HEAT RATE - A number that tells how efficient a fuel-burning power plant is. The heat rate equals the Btu content of the fuel input divided by the kilowatt-hours of power output.

HEDGING CONTRACTS - Contracts which establish future prices and quantities of electricity independent of the short-term market. Derivatives may be used for this purpose.

INVESTOR-OWNED UTILITIES (IOUs) - A private company that provides a utility, such as water, natural gas or electricity, to a specific service area. The investor-owned utility is regulated by the California Public Utilities Commission. In California, three major investor owned utilities supplying energy are:

- Pacific Gas and Electric Company
- San Diego Gas & Electric
- Southern California Edison Company

KILOWATT (kW) - One thousand (1,000) watts. A unit of measure of the amount of electricity needed to operate given equipment. On a hot summer afternoon a typical home, with central air conditioning and other equipment in use, might have a demand of four kW each hour.

KILOWATT-HOUR (kWh) - The most commonly-used unit of measure telling the amount of electricity consumed over time. It means one kilowatt of electricity supplied for one hour. In 1989, a typical California household consumes 534 kWh in an average month.

MARKET REDESIGN AND TECHNOLOGY UPGRADE (MRTU) – The CAISO developed two parallel programs to gain economic and technical efficiencies: (1) market improvements to assure grid reliability and more efficient and cost effective use of resources, and (2) technical upgrades to strengthen the entire CAISO computer backbone.

MARKET VALUE –The current or prevailing price of a security or commodity as indicated by current market quotations, and therefore the price at which additional amounts presumably can be purchased or sold.

MEGAWATT (MW) - One-thousand kilowatts (1,000 kW) or one million (1,000,000) watts. One megawatt is enough electrical capacity to power 1,000 average California homes.

MEGAWATT HOUR (MWh) - One-thousand kilowatt-hours, or an amount of electrical energy that would supply 1,370 typical homes in the Western U.S. for one month.

MRTU – Market Redesign and Technology Upgrade - MRTU refers to a comprehensive program by the California Independent System Operator (CAISO) to accomplish a number of goals including: fix flaws in its market design which allowed for widespread market abuses and gaming by suppliers; create markets for procuring electricity and reserves necessary to maintain grid reliability both day-ahead and real-time and; provide an efficient means for scheduling and dispatching power plants to avoid transmission congestion problems.

OPTIONS - An option is a contractual agreement that gives the holder the right to buy (call option) or sell (put option) a fixed quantity of a security or commodity (for example, a commodity or commodity futures contract), at a fixed price, within a specified period of time. May either be standardized, exchange-traded, and government regulated, or over-the-counter customized and non-regulated.

OUTAGE (Electric utility) - An interruption of electric service that is temporary (minutes or hours) and affects a relatively small area (buildings or city blocks).

PEAKER - A nickname for a power generating station that is normally used to produce extra electricity during peak load times.

PEAK LOAD OR PEAK DEMAND - The electric load that corresponds to a maximum level of electric demand in a specified time period.

PEAK LOAD - The highest electrical demand within a particular period of time. Daily electric peaks on weekdays occur in late afternoon and early evening. Annual peaks occur on hot summer days.

PEAK LOAD POWER PLANT - A power generating station that is normally used to produce extra electricity during peak load times.

PEAKING UNIT - A power generator used by a utility to produce extra electricity during peak load times.

PORTFOLIO MANAGEMENT - The functions of resource planning and procurement under a traditional utility structure. Portfolio management can also be defined as the aggregation and management of a diverse portfolio of supply (and demand-reduction) resources which will act as a hedge against various risks that may affect specific resources (i.e., fuel price fluctuations and certainty of supply, common mode failures, operational reliability, changes in environmental regulations, and the risk of health, safety, and environmental damages that may occur as a result of operating some supply resources). Under a more market-driven power sector with a "powerpool" or POOLCO wholesale market structure, a portfolio manager would: aggregate and manage a diverse portfolio of spot-market purchases, contracts-for-differences, futures contracts and other market-hedging-type contracts and mechanisms.

POWER - Electricity for use as energy.

PUBLIC INTEREST GOALS - Public interest goals of electric utility regulation include: 1) inter-and intra-class and intergenerational equity); 2) the equal treatment of equals (horizontal equity); 3)balancing long- and short-term goals that have the potential to affect intergenerational balance; 4)protecting against the abuse of monopoly power; and 5) general protection of the health and welfare of the citizens of the state, nation, and world. Environmental and other types of social costs are subsumed under the equity and health and welfare responsibilities.

REAL-TIME MARKET - The competitive generation market controlled and coordinated by the ISO for arranging real-time imbalance energy.

REAL-TIME PRICING - The instantaneous pricing of electricity based on the cost of the electricity available for use at the time the electricity is demanded by the customer.

REGULATORY MUST-TAKE GENERATION -- Utilities will be allowed to generate electricity from those resources -- identified by the CPUC -- that are not subject to competition. These resources will be scheduled with the ISO on a must-take basis. Regulatory Must-Take Generation includes QF generating units under federal law, nuclear units and pre-existing power-purchase contracts that have minimum-take provisions.

RELIABILITY – The degree of performance of the elements of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amounts desired. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply. Electric system reliability can be addressed by considering two basic and functional aspects of the electric system:

Adequacy. The availability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.

Security. The ability of the electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system elements.

RELIABILITY MUST-RUN GENERATION - The ISO will allow utilities to generate power that is needed to ensure system reliability. This includes generation:

- Required to meet the reliability criteria for interconnected systems operation.
- Needed to meet load (demand) in constrained areas.
- Needed to provide voltage or security support of the ISO or of a local area.

RELIABILITY MUST RUN UNITS (RMR) – generation units that are called on to operate out of merit order to resolve transmission constraints and provide for the reliable operation for the system.

RENEWABLE ENERGY - Resources that constantly renew themselves or that are regarded as practically inexhaustible. These include solar, wind, geothermal, hydro and wood. Although particular geothermal formations can be depleted, the natural heat in the earth is a virtually inexhaustible reserve of potential energy. Renewable resources also include some experimental or less-developed sources such as tidal power, sea currents and ocean thermal gradients.

RENEWABLE RESOURCES - Renewable energy resources are naturally replenishable, but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Some (such as geothermal and biomass) may be stock-limited in that stocks are depleted by use, but on a time scale of decades, or perhaps centuries, they can probably be replenished. Renewable energy resources include: biomass, hydro, geothermal, solar and wind. In the future they could also include the use of ocean thermal, wave, and tidal action technologies. Utility renewable resource applications include bulk electricity generation, on-site electricity generation, distributed electricity generation, non-grid-connected generation, and demand-reduction (energy efficiency) technologies.

RESERVE - The extra generating capability that an electric utility needs, above and beyond the highest demand level it is required to supply to meet its users¼ needs.

RESERVE GENERATING CAPACITY - The amount of power that can be produced at a given point in time by generating units that are kept available in case of special need. This capacity may be used when unusually high power demand occurs, or when other generating units are off-line for maintenance, repair or refueling.

RESERVE MARGIN - The differences between the dependable capacity of a utility's system and the anticipated peak load for a specified period.

RESOURCE ADEQUACY - Resource Adequacy (RA) is a CPUC mandated planning and procurement requirement to ensure that load serving entities (LSE) like PG&E, SCE and SDG&E have adequate, verifiable generation resources to serve their customers. The RA requirement that LSEs must meet is a planning reserve margin of 15 percent. This percent is a measure of the amount of surplus generation that an LSE has above that needed to meet the forecasted peak load demand of their customers every month.

SURPLUS - (Electric utility) Excess firm energy available from a utility or region for which there is no market at the established rates.

UTILITY - A regulated entity which exhibits the characteristics of a natural monopoly. For the purposes of electric industry restructuring, "utility" refers to the regulated, vertically-integrated electric company. "Transmission utility" refers to the regulated owner/operator of the transmission system only. "Distribution utility" refers to the regulated owner/operator of the distribution system which serves retail customers.